Emergency and Disaster Response to Chemical Releases

Technician Level Training

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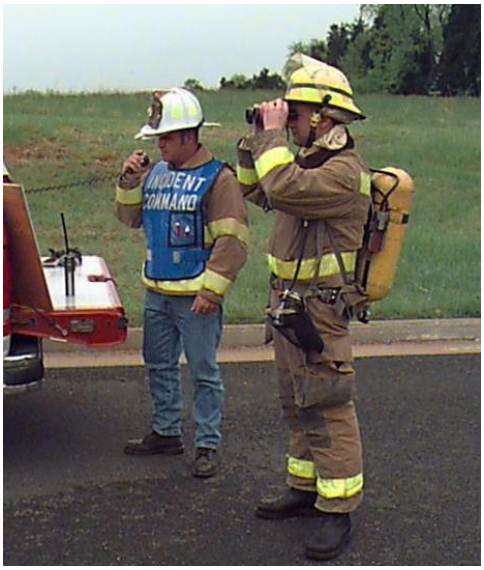

Module 9

Incident Command

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Acronyms Used in This Module

EPA	Environmental Protection Agency
ERT	Emergency Response Team
IAP	Incident Action Plan
IC	Incident Commander
ICS	Incident Command System
JIS	Joint Information System
LO	Liaison Officer
NIC	NIMS Integration Center
NIMS	National Incident Management System
OSHA	Occupational Safety and Health Administration
PIO	Public Information Officer
PPE	Personal Protective Equipment
SARA	Superfund Amendment Reauthorization Act
SO	Safety Officer
UC	Unified Command

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Overview

The Incident Command System provides a clear structure for the diverse activities necessary to successfully control a hazardous materials incident. The key element of any Incident Command model is that there is a single person in charge of the incident. This single person is responsible for the overall command of the incident and the establishment of the goals and objectives at the scene. This allows the efficient utilization of all resources when dealing with an emergency while performing the response in a controlled and well-organized manner. Finally, the risks to responders and other personnel are minimized when the Incident Command System is in place.

Terminal Objective

Upon completion of this topic, the participant will understand the purpose of, and be able to function under, NIMS/UC and the Incident Command System.

Enabling Objectives

Based on the information presented in the classroom and in the participant guide, the participant will be able to:

1. Describe the purpose of the NIMS/UC and the Incident Command System.
2. Identify the management concepts that are employed in an Incident Command System.
3. Explain the Command Function.
4. List the responsibilities of the Safety Officer.
5. Describe the responsibilities of the Initial Incident Commander.
6. Describe the process of Transfer of Command.

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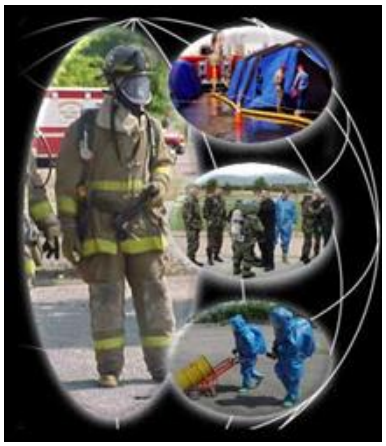
Introduction

There are a number of sound reasons for using an Incident Command System when dealing with hazardous materials emergencies. Above all, an Incident Command System provides a clear structure for the diverse activities necessary to successfully control a hazardous materials incident or engaging in a disaster response.

National Incident Management System



NIMS establishes standardized incident management processes, protocols, and procedures that all responders – federal, state, tribal, and local – will use to coordinate and conduct response actions. With responders using the same standardized procedures, they will all share a common focus and will be able to place full emphasis on incident management when a homeland security incident occurs – whether terrorism or natural disaster. In addition, national preparedness and readiness in responding to and recovering from an incident is enhanced since all of the Nation's emergency teams and authorities are using a common language and set of procedures.

Advantages of NIMS

NIMS incorporates incident management best practices developed and proven by thousands of responders and authorities across America. These practices, coupled with consistency and national standardization, will now be carried forward throughout all incident management processes: exercises, qualification and certification, communications interoperability, doctrinal changes, training, publications, public affairs, equipping, evaluating, and incident management. All of these measures unify the response community as never before.

The NIMS provides a consistent, flexible and adjustable national framework within which government and private entities at all levels can work together to manage domestic incidents, regardless of their cause, size, location or complexity. This flexibility applies across all phases of incident management: prevention, preparedness, response, recovery, and mitigation.

The NIMS provides a set of standardized organizational structures – including the ICS, Multi-Agency Coordination Systems and public information systems – as well as requirements for processes, procedures, and systems to improve interoperability among jurisdictions and disciplines in various areas.

Homeland Security recognizes that the overwhelming majority of emergency incidents are handled on a daily basis by a single jurisdiction at the local level. However, the challenges we face as a nation are far greater than the capabilities of any one community or state but no greater than the sum of all of us working together.

There will be instances in which successful domestic incident management operations depend on the involvement of emergency responders from multiple jurisdictions, as well as personnel and equipment from other states and the federal government. These instances require effective and efficient coordination across a broad spectrum of organizations and activities.

The success of the operations will depend on the ability to mobilize and effectively utilize multiple outside resources. These resources must come together in an organizational framework that is understood by everyone and must utilize a common plan, as specified through a process of incident action planning. This will only be possible if we unite, plan, exercise and respond using a common National Incident Management System.

When Homeland Security released the NIMS on March 1, 2004, Secretary Tom Ridge and Under Secretary Brown specifically highlighted compliance with the ICS as being possible fairly quickly. They recognized that in some cities, the fire and police departments have worked together using ICS for years. In other places, only the fire department used ICS. Although law enforcement, public works and public health were aware of the concept, they regarded ICS as a fire service system. The NIMS ends this discrepancy because HSPD-5 requires state and local adoption of NIMS as a condition for receiving federal preparedness funding. While ICS was first pioneered by the fire service, it is, at its core, a management system designed to integrate resources to effectively attack a common problem. This system is not exclusive to one discipline or one set of circumstances; its hallmark is its flexibility to accommodate all circumstances.

Key Features of NIMS

Incident Command System (ICS)

INCIDENT COMMAND SYSTEM: COMMAND STAFF & GENERAL STAFF

NIMS establishes ICS as a standard incident management organization with five functional areas – command, operations, planning, logistics, and finance/administration – for management of all major incidents. To ensure further coordination, particularly during incidents involving

multiple jurisdictions or agencies, the principle of unified command has been universally incorporated into NIMS. This unified command not only coordinates the efforts of many jurisdictions but provides for and ensures joint decisions on objectives, strategies, plans, priorities, and public communications.

Communications and Information Management

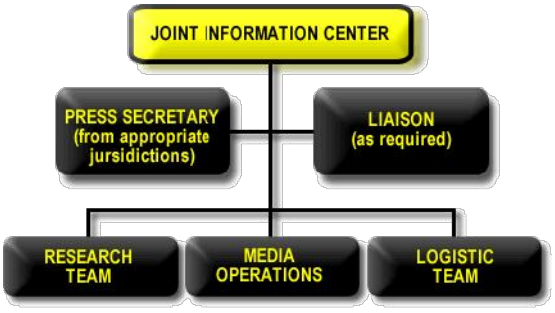
Standardized communications during an incident are essential and NIMS prescribes interoperable communications systems for both incident and information management. Responders and managers across all agencies and jurisdictions must have a common operating picture for a more efficient and effective incident response.

Preparedness

Preparedness incorporates a range of measures, actions, and processes accomplished before an incident happens. NIMS preparedness measures include planning, training, exercises, qualification and certification, equipment acquisition and certification, and publication management. All of these serve to ensure that pre-incident actions are standardized and consistent with mutually-agreed doctrine. NIMS further places emphasis on mitigation activities to enhance preparedness. Mitigation includes public education and outreach, structural modifications to lessen the loss of life or destruction of property, code enforcement in support of zoning rules, land management and building codes, and flood insurance and property buy-out for frequently flooded areas.

Joint Information System (JIS)

NIMS organizational measures enhance the public communication effort. The Joint Information System provides the public with timely and accurate incident information and unified public messages. This system employs Joint Information Centers (JIC) and brings incident communicators together during an incident to develop, coordinate, and deliver a unified message. This will ensure that federal, state, and local levels of government are releasing the same information during an incident.



JOINT INFORMATION CENTER ORGANIZATION

NIMS Integration Center (NIC)

To ensure that NIMS remains an accurate and effective management tool, the NIMS NIC will be established by the Secretary of Homeland Security to assess proposed changes to NIMS, capture and evaluate lessons learned, and employ best practices.

The NIC will provide strategic direction and oversight of NIMS, supporting both routine maintenance and continuous refinement of the system and its components over the long term. The NIC will develop and facilitate national standards for NIMS education and training, first responder communications and equipment, typing of resources, qualification and credentialing of incident management and responder personnel, and standardization of equipment maintenance and resources. The NIC will continue to use the collaborative process of federal, state, tribal, local, multi-discipline and private authorities to assess prospective changes and assure continuity and accuracy.

Unified Command (UC)

Unified Command (UC) is an important element in multi-jurisdictional or multi-agency domestic incident management. It provides guidelines to enable agencies with different legal, geographic, and functional responsibilities to coordinate, plan, and interact effectively. As a team, the Unified Command overcomes much of the inefficiency and duplication of effort that can occur when agencies from different functional and geographic jurisdictions, or agencies at different levels of government, operate without a common system or organizational framework. The primary difference between the single command structure and the UC structure is that in a single command structure, the IC is solely responsible for establishing incident management objectives and strategies. In a UC structure, the individuals designated by their jurisdictional authorities jointly determine objectives, plans, and priorities and work together to execute them.

General Staff

The General Staff includes incident management personnel who represent the major functional elements of the ICS, including the Operations Section Chief, Planning Section Chief, Logistics Section Chief, and Finance/Administration Section Chief. Command Staff and General Staff must continually interact and share vital information and estimates of the current and future situation and develop recommended courses of action for consideration by the IC.

ICS Command Staff

Command comprises the Incident Commander (IC) and Command Staff. Command staff positions are established to assign responsibility for key activities not specifically identified in the General Staff functional

elements. These positions may include the Public Information Officer (PIO), Safety Officer (SO), and the Liaison Officer (LO), in additional to various others, as required and assigned by the IC.

Incident Action Plan (IAP)

The IAP includes the overall incident objectives and strategies established by the IC or UC. The Planning Section is responsible for developing and documenting the IAP. In the case of UC, the IAP must adequately address the overall incident objectives, mission, operational assignments, and policy needs of each jurisdictional agency. This planning process is accomplished with productive interaction between jurisdictions, functional agencies, and private organizations.

IAP also addresses tactical objectives and support activities for one operational period, generally 12 to 24 hours. The IAP also contains provisions for continuous incorporation of "lessons learned" as identified by the Incident Safety Officer or incident management personnel as activities progress.

Area Command

Area Command is activated only if necessary, depending on the complexity of the incident and span-of-control considerations. An area command is established either to oversee the management of multiple incidents that are being handled by separate ICS organizations or to oversee the management of a very large incident that involves multiple ICS organizations. It is important to note that Area Command does not have operational responsibilities. For incidents under its authority, the Area Command:

- Sets overall agency incident-related priorities;
- Allocates critical resources according to established priorities;
- Ensures that incidents are managed properly;
- Ensures effective communications;
- Ensures that incident management objectives are met and do not conflict with each other or with agency policies;
- Identifies critical resource needs and reports them to the Emergency Operations Center(s);
- Ensures that short-term emergency recovery is coordinated to assist in the transition to full recovery operations; and

- Provides for personnel accountability and a safe operating environment.

The ICS organization has five major functions, including command, operations, planning, logistics, and finance and administration. In the NIMS ICS, a potential sixth functional area to cover the intelligence function can be established for gathering and sharing incident related information and intelligence.

The Information and Intelligence function provides analysis and sharing of information and intelligence during an incident. Intelligence can include national security or classified information but also can include operational information such as risk assessments, medical intelligence, weather information, structural designs of buildings, and toxic contaminant levels.

Traditionally, Information and Intelligence functions are located in the Planning Section. In exceptional situations, however, the IC may need to assign this role to other parts of the ICS organization. Under the NIMS ICS, the Intelligence and Information function may be assigned in one of the following ways:

- Within the Command Staff;
- As a unit within the Planning Section;
- As a branch within the Operations Section; or
- As a separate General Staff Section.

Purpose of Incident Command

Ensuring That Someone Is Always in Charge

A key element of any Incident Command model is that a single person is in charge at each incident. This person is responsible for overall command of the emergency response and for establishing operational goals and objectives at the scene.

By having one person in charge, two major pitfalls are avoided. One of these is having no one in charge. A second major problem prevented by an Incident Command System is that of too many people taking charge. When more than one person acts as the Incident Commander, conflicting orders and directives may be issued and the actions of emergency response forces are likely to be poorly coordinated.

Ensuring the Safety of Operating Forces

Emergency response personnel are confronted by a number of safety hazards during an emergency. An Incident Command System helps ensure that actions taken at an incident are effectively controlled and that the safety of forces operating at an emergency is not compromised.

Conforming to Laws and Standards

Another significant reason for implementing an Incident Command System when dealing with hazardous materials emergencies is that laws require it and consensus standards encourage it. The Superfund Amendments and Reauthorization Act of 1986 (SARA) requires that emergency response organizations handling hazardous materials incidents operate with an Incident Command System. Regulations from the Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) mandate use of Incident Command Systems as well.

Efficiently Utilizing Resources

When dealing with any emergency, it is important that the resources for stabilizing and controlling the incident be used efficiently. Incident Command Systems provide the structure for managing these resources and ensuring that they are deployed effectively. These resources include personnel, apparatus, specialized equipment, materials, and facilities required to deal with the emergency.

In summary, there are many reasons for using an Incident Command System in hazardous materials emergencies. All of these reasons evolve from an underlying rationale: the response to an emergency should be controlled and well organized. Resources used to stabilize the emergency should be used to maximum benefit. The risks to which Team Members and other emergency response personnel are subjected should be minimized wherever possible.

ICS Concepts and Principles

The adaptable ICS structure is composed of major components to ensure quick and effective resource commitment and to minimize disruption to the normal operating policies and procedures of responding

organizations. Remember that ICS concepts and principles have been tested and proven over time in business and industry and by response agencies at all governmental levels. ICS training is required to ensure that all who may become involved in an incident are familiar with ICS principles.

An ICS structure should include the following:

- Common terminology
- A modular organization
- Integrated communications
- Unity of command
- A unified command structure
- Consolidated IAPs (Incident Action Plans)
- A manageable span of control
- Designated incident facilities
- Comprehensive resource management

Common Terminology

Common terminology is essential in any emergency management system, especially when diverse or other than first-response agencies are involved in the response. When agencies have slightly different meanings for terms, confusion and inefficiency can result. In ICS, major organizational functions, facilities, and units are pre-designated and given titles. ICS terminology is standard and consistent among all of the agencies involved.

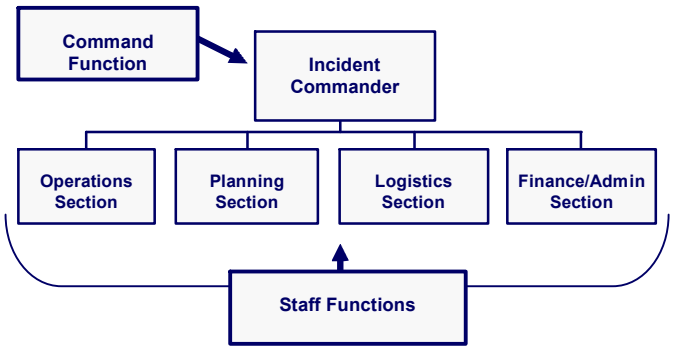
To prevent confusion when multiple incidents occur at the same time within the same jurisdiction, or when the same radio frequency must be used for multiple incidents, the Incident Commander will specifically name the incident. For example, an incident that occurs at 14th and Vine might be called "Vine Street Command." One that occurs at 14th and Kirkwood might be called "Kirkwood Command." Other guidelines for establishing common terminology include:

- Response personnel should use common names for all personnel and equipment resources, as well as for all facilities in and around the incident area.

- Radio transmissions should use clear text (that is, plain English without "ten" codes or agency specific codes).

Modular Organization

Modular organization develops from the top-down organizational structure at any incident. "Top-down" means that, at the very least, the first-arriving person who becomes the initial Incident Commander establishes the Command function. As the incident warrants, the Incident Commander activates other functional areas (sections). In approximately 95 percent of all incidents, the organizational structure for operations consists of command and single resources. If needed, however, the ICS structure can consist of several layers.



Integrated Communications

Integrated communications is a system that uses a common communications plan, standard operating procedures, clear text, common frequencies, and common terminology. Several communication networks may be established, depending on the size and complexity of the incident.

Unity of Command

Unity of command is the concept by which each person within an organization reports to only one designated person.

Unified Command

A unified command allows all agencies with responsibility for the incident, either geographic or functional, to manage an incident by establishing a common set of incident objectives and strategies. Unified command does not mean losing or giving up agency authority, responsibility, or accountability. The concept of unified command means that all involved agencies contribute to the command process by:

- Determining overall objectives.
- Planning jointly for operational activities while conducting integrated operations.

- Maximizing the use of all assigned resources.
- Under Unified Command, the following always applies.
    - The incident functions under a single, coordinated IAP.
    - One Operations Section Chief has responsibility for implementing the IAP.
    - One ICP (Incident Command Post) is established.

Consolidated IAPs

These describe response goals, operational objectives, and support activities. The decision to have a written IAP is made by the Incident Commander. ICS requires written plans whenever:

- Resources from multiple agencies are used.
- Several jurisdictions are involved.
- The incident is complex.

IAPs should cover all objectives and support activities that are needed during the entire operational period. A written plan is preferable to an oral plan because it clearly demonstrates responsibility, helps protect the community from liability suits, and provides documentation when requesting state and federal assistance. IAPs that include the goals and measurable objectives to be achieved are always prepared around a time frame called an operational period.

Span of Control

A manageable span of control is defined as the number of individuals one supervisor can manage effectively. In ICS, the span of control for any supervisor falls within a range of three to seven resources, with five being the optimum. If that number increases or decreases, the Incident Commander should reexamine the organizational structure.

Designated Incident Facilities

Designated incident facilities include:

- The Incident Command Post.
- Staging Areas.
- Bases.

The Incident Commander will establish an ICP at every incident. Initially, the ICP may be located in a vehicle and, in small incidents, may remain there. When it becomes clear that the incident is escalating in size, complexity or risk, the Incident Commander will establish a more permanent facility that is:

- Away from the confusion surrounding the incident.
- Outside the hazard area.
- Within view of the incident, when possible.

The Incident Commander will ensure that the ICP meets the needs of the incident and will:

- Name the ICP.
- Mark it clearly using the standard ICS symbol on a map, or with a light, sign, or flag at the site.
- Communicate its name and location to both responders and dispatch.

As an incident escalates, the Incident Commander may identify the need for one or more Staging Areas where incident resources can be located while awaiting immediate assignment. Like the ICP, each Staging Area will be named and identified using the standard ICS symbol for a Staging Area. Staging Areas:

- Should be away from the incident but close to operational assignments.
- Should be out of the way of potential hazards.
- Must have different access routes for incoming and outgoing personnel.
- Must be large enough to accommodate available resources and should be expandable, if necessary.
- Must be secure.

When an incident covers a large geographic area, or if the Incident Commander expects that the incident will continue for an extended period, he or she may establish a Base to provide primary services and support activities. There should be only one Base for an

incident. The Base should be named and identified using the standard ICS symbol for a Base.

The Incident Commander may establish other incident facilities, such as a camp, helibase and helispot, or a CCP if the incident warrants.

Comprehensive Resource Management

Comprehensive resource management accomplishes the following:

- Maximizes resource use
- Consolidates control of single resources
- Reduces the communications load
- Provides accountability, reduces freelancing
- Ensures personnel safety

All resources are assigned to a status condition.

- Assigned resources are performing active functions.
- Available resources are ready for assignment.
- Out-of-service resources are not ready for assigned or available status.

Any changes in resource location and status must be reported promptly to the Resource unit by the person making the change. Personnel accountability is provided throughout all of ICS. All personnel must check-in as soon as they arrive at an incident. Resource units, assignment lists, and unit logs are always for personnel to be accounted for. When personnel are no longer required for the response, they must check out so that they can be removed from the resource lists.

The ICS principles can and should be used for all types of incidents, both small and large. Because ICS can be used at virtually any type of incident of any size, it is important that all responders use the ICS approach.

Assuming Command of the Emergency

Every responder may, at some point, be placed in a position of having to assume initial command of a hazardous materials incident. As noted in previous sections, the Command Function is a requirement in emergency response situations involving hazardous materials. As the individual in charge, the Incident Commander must temper the desire to take immediate action and focus instead on activities that are well planned and considered. In addition, the Incident Commander must

maintain a broad, future-oriented outlook and make a concerted effort to consider the entire incident, all the factors affecting it, and the likely course of events in the future.

Implementing the Command Function

Command should be implemented as early in the incident as possible. In general, the person in charge of the first arriving group should assume command of the incident. The underlying rationale for establishing command as promptly as possible is that the response should be organized and controlled from start to finish.

It is very difficult to recover from initial errors that were made because the Command Function was not implemented at the earliest possible stage of the incident.

Many people are under the mistaken impression that assumption of command is a responsibility for management personnel. This is not the case. Often, the most important decisions concerning effective stabilization and control of an incident must be made in the first few minutes after the arrival of initial responding personnel.

Responsibility of the Initial Incident Commander

There are six specific responsibilities assumed by the Initial Incident Commander.

Make an Initial On-Scene Assessment

Upon arrival to the scene, the Initial Incident Commander must carefully evaluate the situation. There are several questions that should be asked during this evaluation:

- Are lives in jeopardy?
- What property is at risk?
- What are the hazards?
- What can be done safely to control all hazards?

The answers to these and other questions must be carefully considered in the earliest stages of a response.

Determine Actions

After an initial evaluation of the emergency has been made, the Incident Commander must make a fundamental decision as to whether to approach stabilization and control of the incident from an offensive or defensive mode. There are a number of factors that must be considered in making the offensive/defensive decision. Among the most important

factors that affect this decision are life hazards, size and complexity of the incident, materials involved, and the quantity and availability of resources that can be placed into action.

Establish Initial Goals and Objectives

After making an assessment of the situation and deciding on an offensive or defensive approach, the Incident Commander must establish initial goals and objectives. These goals and objectives should always be realistic and focused on saving lives, stabilizing the incident, and minimizing economic and environmental impact caused by the incident. The Incident Commander should consider a "best case" scenario and develop initial goals and objectives from a pro-active standpoint.

Determine Additional Requirements

In most serious hazardous materials emergencies, initial response resources will not be adequate to stabilize, control, and terminate the incident. One of the most important functions of the Initial Incident Commander is to determine resource needs and promptly initiate the appropriate requests for additional personnel, apparatus, material, equipment, and other assistance as required.

Deploy Personnel and Units

Closely related to the function of establishing goals and objectives is the deployment of units and personnel in support of these goals and objectives. An integral element of deploying personnel and units is issuing specific, objective-oriented assignments.

Establish a Command Post

During initial evaluation it is not unusual for the Initial Incident Commander to move around the scene of an incident in an effort to obtain complete information. However, in all but the most minor incidents, it is important that a formal, stationary Command Post be established promptly. In addition to being located in a safe area, the Command Post should be easily visible.

Transfer of Command

As a hazardous materials incident evolves, it is likely that transfers of command will take place. The most critical transfers of command occur while an incident is still escalating. Typically, ranking or more highly trained personnel arrive on the scene and subsequently assume the function of Incident Commander. The transfer of command is a transaction between these parties. The responsibility for initiating the transaction rests with the person who desires to assume command. Once this request has been made, it is the responsibility of the incumbent Incident Commander to brief the new Incident Commander on the response situation, the action plan in effect, the status of resources at the scene, and any unusual safety problems. After this exchange of information, the new Incident Commander then assumes the Command Function.

Incident Termination

An often overlooked but essential element of incident management deals with those actions that take place after the incident has been stabilized. Even after an incident has been stabilized, the job of the Incident Commander remains vital.

Command Activities During Termination

The key functions and structure of an Incident Command System must be maintained throughout the incident. This ensures that the situation is mitigated and that cleanup activities return the facility and/or environment to the conditions equal to those that existed prior to the incident.

Summary

The ICS uses common terminology with common names for personnel assignments and equipment. The ICS modular format uses a top down organizational structure with five primary functional areas:

- Command
- Operations
- Planning
- Logistics
- Finance/Administration

The Incident Command System (ICS) is the combination of personnel, procedures, facilities, equipment, and communications operating within a common organizational structure designed to aid in the management of resources at emergency incidents. The ICS is designed for use in all kinds of emergencies and is applicable to both small day-to-day situations as well as very large and complex incidents, including government, industry, non-governmental organizations, and citizen emergency response teams.

The basic system design operating characteristics of the Incident Command System consist of:

- Single jurisdiction/single agency.
- Single jurisdiction with multi-agency involvement.
- Multiple jurisdictions one/multi-agency involvement.
- The System's organizational structure adapts to any emergency or incident to which emergency response agencies and second responders would be expected to respond.
- The System is applicable and acceptable to users throughout the country.
- The System is readily adaptable to new technology.
- The System expands in a logical manner from an initial response situation into a major incident.
- The System has basic common elements in organization, terminology, and procedures.
- The System, when implemented, has the least possible disruption to existing systems in both government and industry.
- The System is effective in fulfilling all of the above requirements and yet is simple enough to ensure low operational maintenance costs.
- Facilitates both interagency planning and incident management.

Review Questions

1. List the elements that should be included in an effective incident management system.

2. Define operational objectives.

3. Who has the overall responsibility of managing an incident?

4. What are sectors?

5. What responsibilities might a Safety Officer have in the Incident Command system?

6. Describe the responsibilities of the Initial Incident Commander.

7. Who has the overall responsibility of managing an incident?

8. When does transfer of command occur?

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